

Appendix A

Vignaud et al. (2023) - Examining individual behavioural variation in wild adult bull sharks (*Carcharhinus leucas*) suggests divergent personalities

A1. Methods: In-depth experiment and observation setup

A1.1. Experiment setup

The setup was identical at both sites, only different in depth (site A: 24 m deep vs site B: 12 m deep), time (8:45 am for site A, 11:15 am for site B) and food given (occasional opah (*Lampris guttatus*) heads in pieces at site B, almost only tuna (various species) heads at site A). One bag of approximately 20 kg of fish heads was brought down to an aluminum box shaped like a container table, allowing one feeder and one bodyguard to stand behind it. One piece of fish head was pushed up and away from the box with a long (2.5 m) metal stick and released in the water column. The feeder and feeding stick immediately returned at initial position (behind the aluminum box), not interfering with the feeding action. In most cases, after the fish piece was released, one-spotted red snappers (*Lutjanus bohar*) repeatedly bit on it, generating loud sounds that triggered nearby bull sharks to come and feed, usually at a fast pace, leading to one feeding action. The same protocol was repeated for about 25 min at site A and 45 min at site B, for a total of 15–30 feeding actions per dive.

A1.2 Behaviour observation setup

A rock wall was setup in close proximity of the feeding area, and sharks were trained to not cross or venture in the area past that wall, instead focusing their space use either in the feeding area or offshore it, usually within a 30–100 m radius depending on days and individuals.

Behavioural traits and their evolution over time were observed by one single observer cumulating over one thousand hours of careful and educated observations on several dozen bull sharks. Among 70+ easy to identify recorded individuals, 31 were used here either for their engagement with the action (leading to a lot of information on them, but biasing the dataset towards bolder individuals, see discussion) and because they were present on numerous occasions over several months or years, allowing for dozens of hours of observations per individual, on different days, at different time (seasons) of the year, and with different groups of other individuals. Observations focused on body language, swimming pattern and speed, angles of approach to food or divers, space use and feeding behaviour, and the evolution of all the above over time.